

Audio Enhancement

Audio Enhancement delivers clear sound so students can hear the teacher in today's interactive classroom.



Audio Enhancement's teardrop-shaped microphone is ergonomically designed and hangs like a necklace to capture and deliver clear sound to the amplification system.



"Audio enhancement is important to the learning process for every student. Clear sound makes learning easier for students and eliminates the need for teachers to strain their voice."

—Jim Locascio, President, Dukane AV



SPEAKERS

RECEIVER

MICROPHONE



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DUKANE
Education. Presentation. Inspiration.

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AUDIO AMPLIFICATION EXPLAINED

Classroom audio systems improve learning by delivering clear sound so ALL students can hear the teacher in today's interactive classroom.

CLASSROOM VOICE AUGMENTATION

Voice augmentation or voice enhancement is the use of a small microphone to amplify sound delivered to speakers through a receiver. The benefit is that every student can hear the teacher clearly. This enables students to hear clearly to understand the information being delivered. In addition, the teacher need not raise or strain their voice.

IMPROVES STUDENT PERFORMANCE

Voice enhancement is a proven technology that increases student performance. It has already been specified in 3 states for installation in every new classroom and is under consideration by many other Districts nationwide.

HOW IT WORKS

A teacher simply wears a lightweight pendant microphone ("mic") hanging from a safety lavalier cord around their neck. The mic operates for 8 hours. No external battery or belt pack is required. At the end of the day the mic can be inserted into a charging stand. The next morning they take the fully-charged mic and use it for another day. The charging stand can also hold a hand mic ready for 8 hours of use.



In its simplest form this system consists of a teacher mic that transmits the audio by using Infrared radiation emitted from a small emitter like that in a TV remote control. A small dome receiver placed in the room detects the IR radiation signal. The signal is sent from the dome through a cable to an electronic receiver unit. This receiver converts the signal to the original audio which can then be amplified and sent to the speakers.

SAFE AND EFFECTIVE INFRARED TECHNOLOGY

The infrared signals sent out by the mic are confined to the classroom and thus adjacent rooms can be operating with identical equipment with out any interference or special settings. That means teachers can readily use their mic in any outfitted room. The equipment is readily exchangeable should there be a lost item or component failure.

Along with the exclusive mic use in each room, a second mic channel is also available in each room for operation of a hand held mic or second pendant mic. To provide this operation each mic has a protected switch that can be set in the channel 1 or 2 position. The benefit is that the hand held mic can be simultaneously used by a student or visitor.

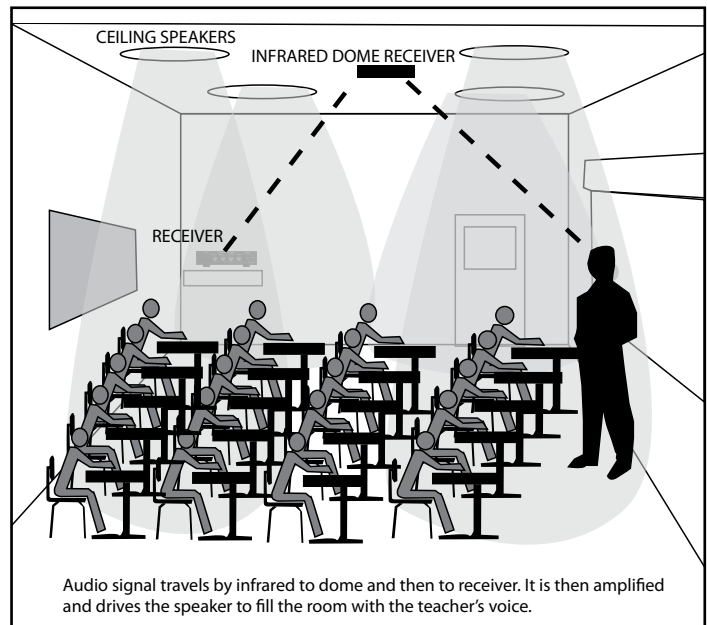
For an advanced classroom with an electronic projector where an audio system with speakers is already in place, the installation is even simpler since only the mic and a IR receiver system are required. This permits full utilization of the student visual and auditory learning process.

Sample Voice Augmentation System

Receiver • Four Speakers • Tear Drop and Handhel Mic



The concept of classroom voice augmentation originated about 25 years ago, but only with the use of infrared signal equipment and echo reduction audio amplification is a simple system possible. In addition, the equipment must be rugged, reliable, and easy to use. Dukane provides a full selection of school tested components for voice enhanced classrooms in any district.



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AUDIO ENHANCEMENT PRODUCT DESCRIPTIONS



Students pay better attention when they can hear the lesson well

1. Achiever, Stand alone system with ceiling speakers;

Part no. 1000-0001 and the charging stand (CS-07) part no. 3110-0010. This is the system for the average classroom. Includes a teacher lavalier mic, IR dome receiver, amplifier / receiver unit, 4 ceiling speakers, charging stand, and the cables for the connections.

2. Achiever Pal Stand alone system with ceiling speakers and an added handheld mic;

Part no. 1000-0004 and the charging stand (CS-07) part no. 3110-0010. Same as above item 1, but with an added handheld mic that will operate on the second channel in each room.

3. Achiever, Stand alone system with wall speakers

Part no. 1000-0002 and the charging stand (CS-07) part no. 3110-0010.

4. Achiever Pal, Stand alone system with wall speakers and an added handheld mic;

Part no. 1000-0005 and the charging stand (CS-07) part no. 3110-0010.

5. IR-2007 Pal, IR Receiver System Parts for addition to existing audio – sound system ;

Part no. 1000-0300, the charging stand (CS-07) part no. 3110-0010, and the Coax cable part no. 200-1616. These are the added components for the average classroom that already contains an audio amplifier and speaker system. It includes teacher lavalier mic, IR dome receiver, a receiver unit, charging stand, plus the cable from the dome to the receiver.

6. IR-2007 Pal, IR Receiver System, Parts for addition to existing audio – sound system and a added handheld mic;

Part no. 1000-0301, the charging stand (CS-07) part no. 3110-0010, and the Coax cable part no. 200-1616. Same as the above item 5, but with an added handheld mic that will operate on the second channel in each room.

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7. Ultimate 2 Larger stand-alone system with ceiling speakers;

Part no. 1000-0101 and the charging stand (CS-07) part no. 3110-0010.

This is the improved system for larger classroom spaces. Includes teacher lavalier mic, IR dome receiver, amplifier (with 50 w output) / receiver unit, 4 ceiling speakers, charging stand, and the cables for the connections.

8. Ultimate 2 Pal, Larger stand-alone system with ceiling speakers and an added handheld mic;

Part no. 1000-0104 and the charging stand (CS-07) part no. 3110-0010.

Same as above item 7, but with an added handheld mic that will operate on the second channel in each room.

9. Ultimate 2 Above models with wall speakers;

Ultimate 2, Part no. 1000-0102

Ultimate 2 Pal, Part no. 1000-0105

10. Innovator, System for the multimedia room, learning center, or other large area.

Part no. 1000-0201 and the charging stand (CS-07) part no. 3110-0010

This is the improved system for larger classroom spaces where 4 simultaneous mics can operate plus selectable muting. Includes teacher lavalier mic, IR dome receiver, amplifier (with 100 w output) / receiver unit, 4 ceiling speakers, charging stand, and the cables for the connections.

Option for a added handheld mic is Innovator Pal, Part no. 1000-0204.

Option for wall speakers is; Innovator ; Part no. 1000-0202

Option for wall speakers is; Innovator Pal ; Part no. 1000-0205

11. Solo Solution, Separate portable system

Solo Solution, Part no. 1200-0501

Solo Solution Pal, Part no. 1200-0502

Solo Solution is a dual channel sound enhancement portable system with an included lavalier teacher mic plus a combined IR dome receiver with amp and single speaker all in one rugged enclosure. Two adjustable audio level inputs for DVD, CD, or other external devices is also included. The unit has an included 24 VDC power supply. Adding a second handheld mic creates the “Pal” version.



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Sample Product Images

Part #	DESCRIPTION; PARTS	Model / Part code
	<u>Kits for installation</u>	
1000-0001	Achiever system with dome receiver, receiver/amp with 20 watt output , teacher mic, 4 ceiling speakers and 50 ft. hook up cable and wire.	Achiever
1000-0002	Achiever system with dome receiver, receiver/amp with 20 watt output , teacher mic, 4 wall mount speakers and 50 ft. hook up cable and wire.	Achiever
1000-0004	Achiever system with dome receiver, receiver/amp with 20 watt output , teacher mic, 4 ceiling speakers and 50 ft. hook up cable and wire. Plus a handheld mic.	Achiever Pal
1000-0005	Achiever system with dome receiver, receiver/amp with 20 watt output , teacher mic, 4 wall mount speakers and 50 ft. hook up cable and wire. Plus a handheld mic.	Achiever Pal
1000-0061	Achiever system with dome receiver, receiver/amp with 20 watt output , teacher mic, and 50 ft. hook up cable. (No speakers)	Achiever
1000-0300	Receiver system with dome receiver, 50 ft plenum cable , receiver, and teacher mic.	IR-2007
1000-0301	Receiver system with dome receiver, 50 ft plenum cable , receiver, and teacher mic. Plus added handheld mic.	IR-2007 Pal
1000-0101	Ultimate2 system with dome receiver, receiver/amp with 50 watt output , teacher mic, 4 ceiling speakers and 50 ft. hook up cable and wires.	Ultimate II
1000-0102	Ultimate2 system with dome receiver, receiver/amp with 50 watt output , teacher mic, 4 wall speakers and 50 ft. hook up cable and wires.	Ultimate II
1000-0104	Ultimate2 system with dome receiver, receiver/amp with 50 watt output , teacher and hand mics, 4 ceiling speakers and 50 ft. hook up cable and wires.	Ultimate II Pal
1000-0105	Ultimate2 system with dome receiver, receiver/amp with 50 watt output , teacher and hand mics, 4 wall speakers and 50 ft. hook up cable and wires.	Ultimate II Pal
1000-0138	Ultimate2 system with dome receiver, receiver/amp with 50 watt output , teacher mic, (No speakers).	Ultimate II
1000-0201	Innovator system with dome receiver, receiver/amp with 100 watt output , teacher mic, 4 ceiling speakers and 50 ft. hook up cable and wires.	Innovator
1000-0204	Innovator Pal system with dome receiver, receiver/amp with 100 watt output , teacher and hand mics, 4 ceiling speakers and 50 ft. hook up cable and wires.	Innovator Pal
1200-0501	Solo Solution ; dual channel portable system with an included lavalier teacher mic plus a combined IR dome receiver with amp and single speaker all in one rugged enclosure.	Solo Solution
1200-0502	Solo Solution ; dual channel portable system with an included lavalier teacher mic plus a combined IR dome receiver with amp and single speaker all in one rugged enclosure. Plus handheld mic.	Solo Solution Pal
	<u>INDIVIDUAL COMPONENTS</u>	
3110-0010	Charging Stand which holde both the lavalier neck mic and the handheld mic	CS-07
3100-0050	Teacher lavalier neck mic, teardrop form, revolutionary patented remote volume control feature, 2 channel selector, includes rechargeable batteries (2), light weight.	AERC-07
3100-0051	Handheld mic lightweight with rechargeable battery	AEH-07
3400-0005	IR Dome sensor for the classroom,	EDS-07
TBD	Coupler for the sonsor coax cables. Allows 4 sensor cables to be coupled to a single cable	AE-DCF
3110-0001	Charger power supply with dual outlets, can charge 2 mics, operates from 115 VAC.	AEBC-07
3120-0001	Battery for the mics, 2 included , type AA NiMH, 2000 mA-Hr.	NMH-AA
		total
	<u>SPEAKERS & SPEAKER ARRAYS FOR THE 2 X2 CEILING TILE</u>	
3300-0202	Ceiling Speaker Kit includes ; 1 Ceiling Speaker, 1 Tile Bridge for a 2'x2' grid, 1-50 foot speaker cable	C-SPKR
3300-0203	Wall speaker includes; mounting bracket and 50 ft speaker wire	W-SPKR
110-4091AC	Speaker Array Assembly for a 2 ft x 2ft suspended ceiling, includes speaker array with 3 super dispersion speakers, safety supports, 50 ft speaker wire	
110-4433C	Delux Speaker array with 4 SD4 super dispersion speakers, safety supports, 50 ft speaker wire	
110-6151C	Wall mounted speaker pair (2 speakers) and brackets for easy mounting, can be angled , includes hardware. Black speaker and bracket	
110-6151-WC	Wall mounted speaker pair (2 speakers) and brackets for easy mounting, can be angled , includes hardware. White speaker and bracket	
200-1851-50	Speaker wire 2 conductor, plenum rated , 18 gage, 50 ft length	
200-1852	Coax Cable for the IR dome to receiver, plenum rated with F- style connectors attached, 50 ft.	
	<u>RECEIVER UNITS</u>	
3000-0001	Receiver and 100 watt amplifier with power supply , simulatenous IR 2 channel operation	CAE-100W
3000-0002	Receiver and 50 watt amplifier with power supply , simulatenous IR 2 channel operation	CAE-50W
3000-0003	Receiver and 20 watt amplifier with power supply , simulatenous IR 2 channel operation	CAE-20W
3000-0210	Receiver, with power supply , simulatenous IR 2 channel operation	RC-07